

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>				1. CONTRACT ID CODE		PAGE OF PAGES 1 3	
2. AMENDMENT/MODIFICATION NO. 000008		3. EFFECTIVE DATE 02/23/2011		4. REQUISITION/PURCHASE REQ. NO.		5. PROJECT NO. (If applicable)	
6. ISSUED BY NASA/Goddard Space Flight Center Procurement Operations Division Greenbelt, MD 20771		CODE 210.1		7. ADMINISTERED BY (If other than Item 6) NASA/Goddard Space Flight Center Procurement Operations Division Greenbelt, MD 20771		CODE 210.1	
8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code) All Offerors				<input checked="" type="checkbox"/> 9A. AMENDMENT OF SOLICITATION NO. NNG10000489R <input type="checkbox"/> 9B. DATED (SEE ITEM 11) 11/24/2010 <input type="checkbox"/> 10A. MODIFICATION OF CONTRACT/ORDER NO. <input type="checkbox"/> 10B. DATED (SEE ITEM 13)			
CODE		FACILITY CODE					

### 11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

☒ The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers ☐ is extended, ☒ is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:

(a) By completing items 8 and 15, and returning 1 copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers, FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment your desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

12. ACCOUNTING AND APPROPRIATION DATA (If required)

### 13. THIS ITEM ONLY APPLIES TO MODIFICATION OF CONTRACTS/ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

CHECK ONE	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.
<input type="checkbox"/>	
<input type="checkbox"/>	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
<input type="checkbox"/>	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
<input type="checkbox"/>	D. OTHER (Specify type of modification and authority)


**E. IMPORTANT:** Contractor ☐ is not, ☐ is required to sign this document and return \_\_\_\_\_ copies to the issuing office.

14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

The solicitation is revised to incorporate the following changes:

(See Continuation Pages.)

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) Lisa A. Bednarik	
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA  (Signature of Contracting Officer)	16C. DATE SIGNED 3/23/11

- A. Clause J.1, Attachment A, Statement of Work, Section 1.12.4, Predictive Testing and Inspection (PT&I) is revised to read:

**Predictive Testing and Inspection (PT&I).** Contractor shall have onsite, vibration analysis capability at or exceeding level 3 as per the vibration Institutes of America requirements. Contractor shall have personnel experienced in all phases of Predictive Testing and Inspection, including but not limited to, Vibration analysis, Motor Circuit Evaluator (MCE), Ultrasonic and Ultrasound testing and inspection, and balancing and alignment of rotational equipment.

- B. Clause J.1, Attachment A, Statement of Work, Section 2.10.3, Reliability Centered Maintenance (RCM) is revised to read:

**Reliability Centered Maintenance (RCM) Requirements**

Introduction: GSFC facility maintenance involves the aggressive and proactive pursuit and implementation of the safest and most cost-effective blend of Reliability Centered Maintenance (RCM) management, procedures, technology, and industry best practices. The GSFC RCM program is managed by the Government, however, coordination, analysis and technical direction is provided through an RCM Coordinator. The data provided for input into the database is supplied by many individuals within the Facilities Maintenance Division and shall be reviewed by the Contractor's RCM Coordinator. The Contractor shall have a RCM Plan in accordance with Section 2.6.

Requirement: The Contractor shall provide an RCM Coordinator who shall work closely with the Government to develop and implement a comprehensive facility RCM program for the equipment and facilities at GSFC and establish the most efficient maintenance organization to protect the health and safety of personnel, protect the environment, protect and preserve GSFC's facility capability and capital investment, enable mission performance, and minimize facility life-cycle costs. The Contractor shall collect and use the data where and when applicable. The Contractor shall have onsite, vibration analysis capability at or exceeding level 3 as per the vibration Institutes of America requirements. Analyst shall use the existing established vibration data base for analysis, trending and reporting. The Contractor shall have an infrared level 3 certified person on site. Contractor shop personnel shall have experience in collection of vibration data and analysis and use of infrared thermography cameras at a Level 2 certification if required for performance of their job. The Contractor shall have onsite personnel experienced in the collection of oil samples for analysis and oil analysis software, motor circuit evaluator (MCE) use and analysis, ultrasonic and ultrasound testing and analysis, shaft and sheave alignment and balancing of rotational facilities equipment. Copies of all PT&I data reports shall be entered into CMMS in reference to the equipment analyzed. As technology changes in the PT&I field, the contractor is responsible for upkeep and updating of PT&I equipment as well as providing training in these technologies and information for upgrades to PT&I equipment and processes to its employees. All certifications and training shall be equivalent to or exceed that of those stated in Part 2 of this SOW. All RCM PT&I software and data shall be accessible to the Government at any time to allow oversight of program.

The Contractor shall provide analyses and recommendations in a broad range of predictive testing and inspection (PT&I) technologies including vibration analysis, motor analysis, thermography, laser alignment, airborne ultrasound, and oil analysis. All of the PT&I that is currently being performed and inspected by the Contractor are listed in Appendix 8. The required analyses shall include structured methods such as root cause failure analysis, and failure modes and effects analysis. Through analysis, the Contractor shall develop alternative solutions for the COTR to review and approve for implementation. Other analyses provided may involve trending in the reduction of scheduled downtime of equipment, the reduction in the number of unexpected failures, and the reduction in the type and number of repairs after 1 year.

The Contractor shall:

- a. Evaluate and develop RCM-based maintenance strategies for facilities equipment. The RCM strategies include performing statistical analyses of historical data related to failures to determine the optimal investment of maintenance resources and risk assessment methods to identify those processes or systems that statistically exhibit the greatest chance of catastrophic failure. This work shall include conducting field investigations and preparing reports, including sketches.
- b. Collect data from equipment in the field. This includes calibrating equipment, if needed; installing test points, when required; setting up new equipment in the database; field analysis of data collected; and downloading of collected data into the respective databases. Many individuals within the Facilities Maintenance Division perform data collection for input into the database. The Contractor shall review this data and collect, distribute, analyze, and use the data.
- c. Document "finds." A "find" is defined as a problem discovered using Predictive Testing and Inspection (PT&I) and allows a repair to take place before a functional failure with no unscheduled impact on operations. This effort will minimize unscheduled downtime of equipment. The Contractor shall document "finds" in the CMMS as a trouble call or a service request and is linked to the PT&I as a "child" in the CMMS. The response of the "find" shall be the same as the priority given for trouble calls and service requests.

Work shall be performed on time and in accordance with requirements and quality standards of the *NASA Reliability Centered Building and Equipment Acceptance Guide* and the *NASA Building and Equipment Commissioning Guide*.

- C. Clause J.1, Attachment Y, Facilities Operations and Maintenance Services Technical Performance Incentive Plan has been revised.

(End of Amendment 8)